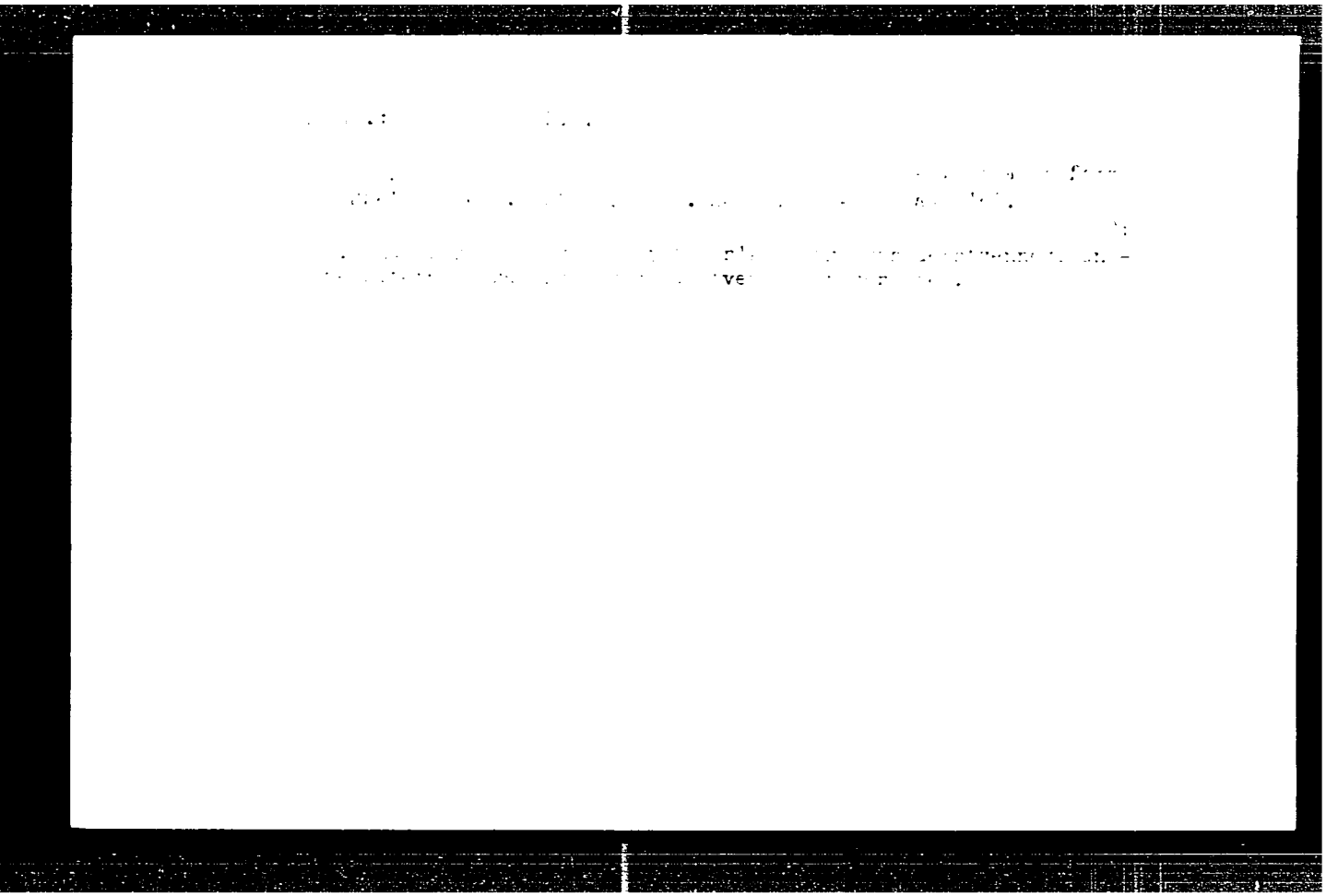
PETRUKHIN, N.

Liquid-fuel meter. Avt. transp. 37 no.12:11-12 D '59.
(MIRA 13:3)
(Automobiles--Fuel consumption)

PETRUKHIN, N.M.; BURSHIN, V.S., starshiy inzhener

Maintenance of line and cable installations of communication systems.
Avtom., telem.i sviaz' no.10:18-22 O '57. (MIRA 10:11)

1. Nachal'nik lineyno-kabel'nogo tsekha TSentral'noy stantsii svyazi Ministerstva putey soobshcheniya (for Petrukhin).
(Electric lines--Maintenance and repair)



L 46877-66 EWT(1) GW
ACC NR: AR6016284

UR/0269/66/000/001/0029/0029

AUTHOR: Petrukhin, N. S.

49
B

TITLE: Equations of convective motion in a polytropic atmosphere with homogeneous vertical or horizontal magnetic fields

SOURCE: Ref. zh. Astronomiya, Abs. 1.51.251

REF SOURCE: Sb. rabot po astron. Ural'skiy un-t, vyp. 2, 1964, 90-107

TOPIC TAGS: motion equation, atmospheric convection, weak magnetic field, homogeneous magnetic field, heat conductivity, gas viscosity, atmospheric temperature gradient

ABSTRACT: Equations of convective motion in a plane-parallel polytropic atmosphere in the presence of a uniform magnetic field are derived. The thermal conductivity and viscosity of the gas are not taken into account. In the case of a weak homogeneous horizontal magnetic field, the instability criterion is found from these equations as

$$\Gamma > \gamma + \Gamma A,$$

where Γ is a constant that characterizes the temperature gradient in the atmosphere; γ the adiabatic index; and $A = (2\Gamma - 1)k_0/(\Gamma - 1)k_0 = -H_0^2/4\pi P_0(z_0)$. H_0 is the unperturbed field strength and $P_0(z_0)$ is the unperturbed pressure at the lower base of the convective zone. Bibliography of 6 citations. V. G. [Translation of abstract]

SUB CODE: 04,20

Card 1/1 pla

UDC: 523.032.53

L 04244-67 EWT(1) GW
ACC NR: AR6004672

SOURCE CODE: UR/0269/65/000/010/0042/0042

AUTHORS: Kaplan, S. A.; Petrukhin, N. S.

TITLE: Interpretation of the "supersonic" propagation of disturbances in the solar photosphere

SOURCE: Ref. zh. Astronomiya, Abs. 10.51.311

REF SOURCE: Solnechnyye dannyye, no. 10, 1964(1965), 63-66

TOPIC TAGS: solar photosphere, solar disturbance, solar magnetic field

ABSTRACT: A theoretical interpretation is given of the phenomenon observed by G. Ya. Vasil'yev on a solar magnetograph of GAO 20 July 1961. A sharp descent of gas with a velocity up to 2 km/sec was observed in the region of a magnetic hill with an intensity up to 100 oe located far from sunspots. This descent occurred following some decrease of the magnetic hill intensity and lasted about 1/4 min, after which the gas began to ascend at half the velocity. The descent of gas began in the central part of the magnetic hill, then the front of the region began to propagate along the surface of the sun to the east with a velocity of 50 km/sec and to the west--up to 280 km/sec. The authors assume that the phenomenon began with the downward drift of a magnetic force tube originally located at a fixed depth z_0, because of which a zone of variable disturbance originated in this region. Sonic dilatation

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UDC: 523.74

L 04244-67

ACC NR: AR6004672

waves began to propagate to all sides from this zone. The subsequent emergence to the surface of the waves emitted at various angles to the normal led to the observed "supersonic" propagation of the gas descent zone along the surface of the sun. A calculation of the propagation time of sonic dilatation waves to the surface of the sun is carried out; the distance along the surface from the point above the source to the point of ray emergence is also calculated as a function of the angle φ_0 between the ray direction and the surface normal. It is assumed for the calculation that the solar atmosphere is polytropic and that the temperature gradient is constant with depth. It is shown that for φ_0, not too close to zero, the velocity of motion of the emergence point of sonic waves to the surface is close to the velocity of sonic waves at the depth of the source. For a propagation velocity of the gas descent zone front of 50 km/sec, the source depth z_0 = 20 000 km. The greater magnitude of the disturbance propagation velocity to the west is explained on the basis of the assumption that the sonic wave source is not concentrated in a small volume at the depth z_0, but extends at this depth in the latitudinal direction at a small angle to the horizontal. Thereby it is assumed that the magnetic force tube before descent was almost horizontal for the most part and in the region of the original magnetic hill abruptly emerged at the surface. The sonic wave range time from the source to the surface along the shortest distance is close to the observed period of disturbance development (14 min), which confirms the proposed interpretation. B. Ioshpa
[Translation of abstract]
SUB CODE: 03

Card 2/2 pkd

L 06147-67 EWT(1) GW

ACC NR: AR6017543 (A,N) SOURCE CODE: UR/0169/66/000/001/A026/A026

AUTHOR: Petrukhin, N. S.

TITLE: Equations of convective motion in a polytropic atmosphere with uniform vertical and horizontal magnetic fields

SOURCE: Ref. zh. Geofizika, Abs. 1A152

REF SOURCE: Sb. rabot po astron. Ural'skiy un-t, vyp. 2, 1964, 90-107

TOPIC TAGS: atmospheric convection, atmospheric movement stability, magnetohydrodynamics, HOMOGENEOUS MAGNETIC FIELD

ABSTRACT: Equations of convective motion in a plane-parallel polytropic atmosphere in the presence of a homogeneous magnetic field are derived. Heat conductivity and viscosity of the gas are disregarded. In the case of a weak homogeneous horizontal magnetic field, a criterion of instability has been derived from the obtained equations, in the form of

$$\Gamma > \gamma + \Gamma A$$

where Γ - a constant characterizing the temperature gradient of the atmosphere, γ - adiabatic exponent, and $A = (2\Gamma - 1)h_0/(\Gamma - 1)$ with $h_0 = H_0^2/4\, P_0(z_0)$, where H_0 is the undisturbed magnetic field strength and $P_0(z)$ - the undisturbed pressure at the base of the convective zone. Translation of abstract .

SUB CODE: 04/

Card 1/1

UDC: 550.385

[illegible]

[illegible]

TITLE: [illegible] polytropic atmosphere with homogeneous [illegible] field

SOURCE: [illegible], Abs. 3H77

REF SOURCE: [illegible], vyp. 2, 1964, 96-107

TOPIC TAGS: atmosphere, polytropic atmosphere, convective motion, convective [illegible], homogeneous magnetic field, thermal convection

ABSTRACT: [illegible] are derived for convective motion in a plane-parallel polytropic atmosphere in the presence of a homogeneous magnetic field. The thermal conductivity and the viscosity of gas are not considered. For the case of a weakly homogeneous horizontal magnetic field, the following criterion of instability is found: [illegible], where Γ is a constant which characterizes the temperature gradient in the atmosphere, γ is an indicator of an adiabatic curve, $A = (2\Gamma - [illegible])h_0/(\gamma - 1)$, $h_0 = H_0^2/4\pi P_0(z_0)$, H_0 is the undisturbed field strength,

Card 1/2

ACC NR: AT6021603

and $P_0(z)$ is the undisturbed pressure at the lower stratum of a convective zone. A bibliography of 6 reference items is included in the original article. [Translation of abstract]

SUB CODE: 20/

L 29126-66 EWT(m)
ACC NR: AP6019404 SOURCE CODE: UR/0240/65/000/011/0086/0091

AUTHOR: Petrukhin, N. V.(Chemical engineer); Pokrovskiy, S. L.; Tikhomirov, V. K.; Ryadov, V. G.(Candidate of medical sciences; Moscow) 65

ORG: none 19 B

TITLE: Determination of radiocesium in environmental objects

SOURCE: Gigiyena i sanitariya, no. 11, 1965, 86-91

TOPIC TAGS: cesium, radioisotope, radiometry, radiation chemistry, scintillation spectrometer

ABSTRACT: The article is essentially a review of the literature. After briefly discussing the distribution and biological characteristics of Cs^{137}, the authors describe in detail methods of preparing samples (liquids, solids, and soil) for analysis. The various radiochemical methods of determining radiocesium are based on the principle of precipitation with specific reagents (12 are listed with the published source where they were first described) and an isotopic carrier, followed by measurement of the activity of the precipate. The carrier generally used is stable Cs, which as a chloride or nitrate solution is added to the solution obtained in the course of preparing the sample for analysis. Radiometry of the preparations is the final procedure. The author notes that spectrometric methods are coming into increasing use. They require crystalline or liquid scintillation elements with analyzers of different kinds of pulses as recording devices. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 18, 07 / SUBM DATE: 11May65 / ORIG REF: 013 / OTH REF: 028

UDC: 614.73:546.176.02.137-074

Card 1/1 cc

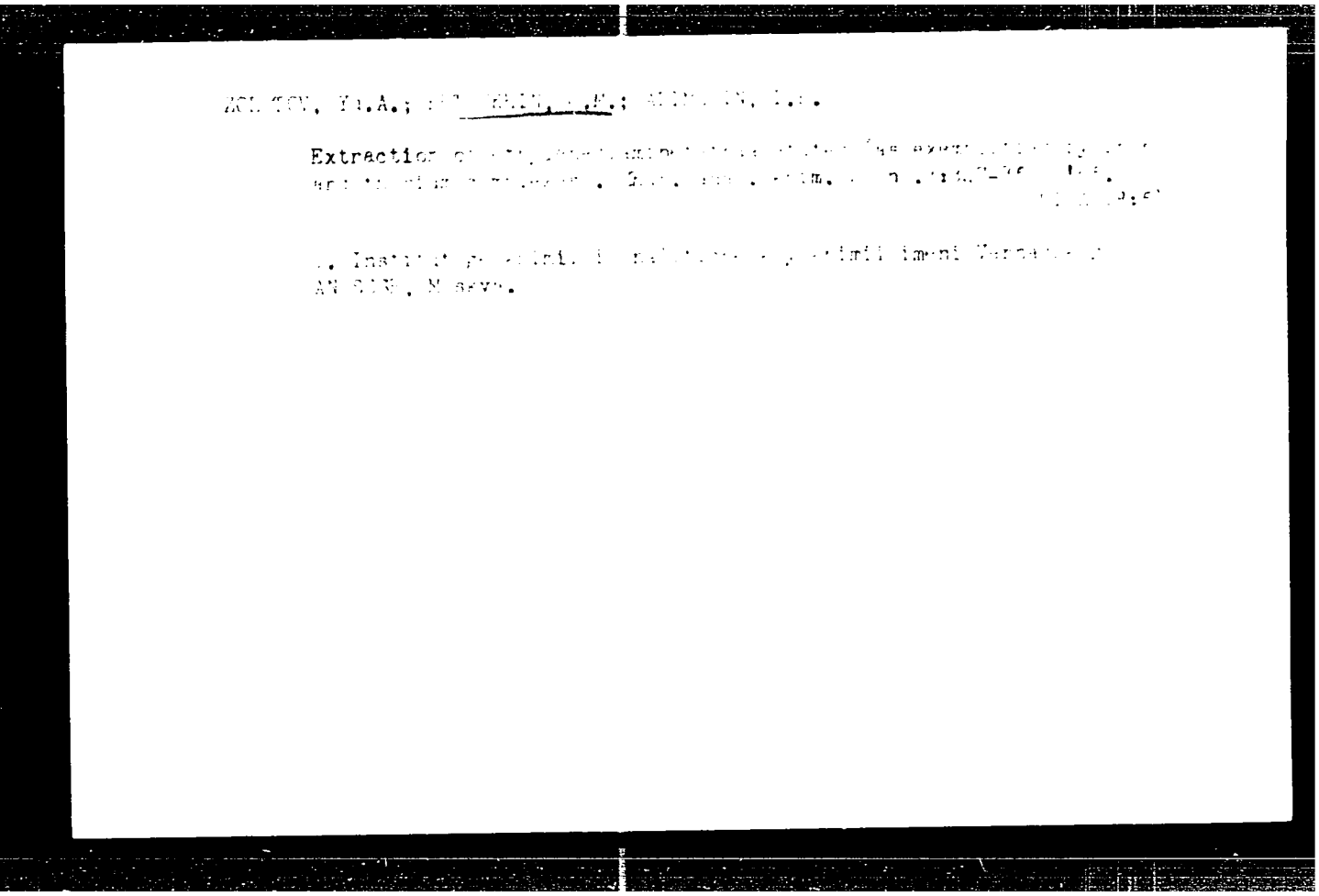
PETRUKHIN, N. V. Cand Vet Sci -- (diss) "The Pharmacology of Aminoatebrin." Mos, 1957. 15 pp 21 cm. (Mos Veterinary Academy of the Min of Agriculture USSR), 140 copies (KL, 17-57, 98)

[illegible], Yu.M., [illegible]

Moscow seminar on analytical chemistry. Zhur. anal. khim. 4[illegible]
[illegible] 1949. 145. (MIRA 18:9)

PETRUKHIN, O.M.; DELKOV, Yu.M.

Moscow Seminar on Analytical Chemistry. Zhur. anal. khim. 2[illegible]
no.10:1141-1142 '65. (MIRA 18:11)



20356

S/020/61/136/005/014/032
B103/B208

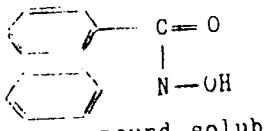
21.3100

AUTHORS: Alimarin, I. P., Corresponding Member AS USSR, Petrukhin, O. M., and Tsze Yun'-syan

TITLE: Separation of niobium and tantalum by extraction of niobium-N-benzoyl-phenyl-hydroxyl aminate

PERIODICAL. Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1073-1074

TEXT: To separate niobium and tantalum, which is one of the most difficult problems in analytical chemistry (Ref. 1), the authors used the cupferron analog N-benzoyl-phenyl-hydroxyl amine (BPHA) in the presence of tartaric acid (Ref. 7)



(BPHA)

BPHA with niobium forms a complex compound soluble in chloroform. Tartaric acid retains both niobium and tantalum in the solution, but does not hinder the extraction. This innovation has, conversely, greatly

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S/020/61/136/005/014/032
B103/B208

Separation of niobium and tantalum ...

facilitated extraction, because the well-known difficulties of extraction arising in the presence of F^- could be thereby avoided. To check extraction, the authors used the radioactive isotopes Nb^{95} and Ta^{182}. To eliminate an incomplete isotopic exchange, Nb^{95} and Ta^{182} were added to the stable isotopes before dissolving the Nb_2O_5 and Ta_2O_5 samples in a mixture of concentrated H_2SO_4 and $(NH_4)_2SO_4$. The resultant cake was dissolved in tartaric acid. The solutions thus prepared contained 0.35 mg/ml Nb_2O_5 and 0.30 mg/ml Ta_2O_5, and were 3 %, referred to tartaric acid. 1 ml of 10% alcoholic BPHA solution was added to 4 ml solution. After the precipitate was formed, 5 ml of chloroform were added, and the mixture shaken for 3 min. The authors found that the pH of the aqueous phase did not change after extraction. Activity was measured in 2 ml taken from the organic phase by means of an apparatus with a γ-counter. The Nb and Ta extraction curves were plotted in dependence on the pH of the solution on the basis of the measured values. The authors found that 98-100% niobium were obtained

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S/020/61/136/005/014/032
B103/B208

Separation of niobium and tantalum ...

in a pH range of 4-6 by a single extraction, whereas no tantalum at all was extracted. At a Ta extraction between pH 0.5 and 3.0, the tantalum compound is partly suspended at the phase boundary. In the range of pH 6-9 the extraction results with tantalum are hardly reproducible. The authors checked this new separation method on artificial Nb-Ta mixtures. In each case, only one of the elements contained the radioactive isotope. The results obtained confirm a satisfactory and quick separation of Nb and Ta up to a quantitative ratio of Nb : Ta = = 100 : 1, 1 : 100. There are 1 figure, 1 table, and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences, USSR)

SUBMITTED November 16, 1960

Card 3/3

L 16604-63

S/075/63/018/004/013/015

The separation of tin .....

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, Academy of Sciences USSR, Moscow)

SUBMITTED: September 10, 1962

Card 2/2

MILICH, N. [Milic,N.], PETRUKHIN, O.M., ZOLOTOV, Yu.A.

Extraction of uranyl thenoyltrifluoroacetonate. Zhur. neorg. khim. 9 no.11:2664-2667 N '64 (MIRA 18:1)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR. Institut "Boris Kidrich", Beograd, Yugoslaviya.

ALIMARIN, I.P.; PETRUKHIN, O.M.; ZOLOTOV, Yu.A.

Extractibility on inner complex compounds as dependent on the pH of the aqueous phase. Minima on the extraction curves. Zhur.-anal.khim. 17 no.5:544-550 Ag '62. (MIRA 15:8)

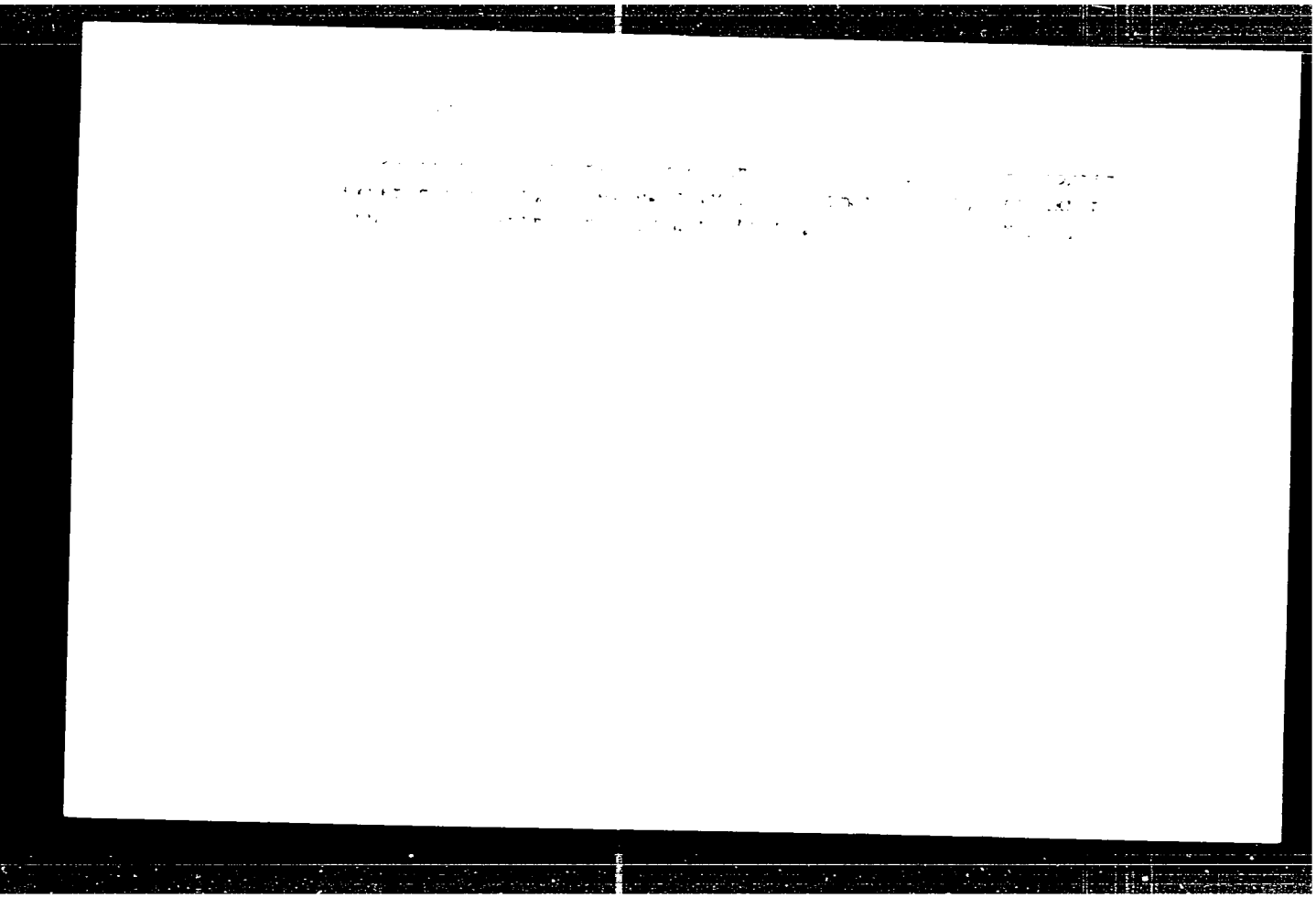
1. V.I.Vernadskiy Institute of Geochemistry and Analytical Chemistry Academy of Sciences, U.S.S.R., Moscow.
(Chelates) (Extraction (Chemistry))
(Hydrogen-ion concentration)

ZOLOTOV, Yu.A., kand.khim.nauk; PETRUKHIN, O.M., kand.khim.nauk

Theory and practice of extraction. Zhur. VKHO [illegible] no. [illegible]

(MIRA [illegible])

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240620011-4"



L 10617-63 EWP(q)/EWT(m)/BDS AFFTC JD

ACCESSION NR: AP3001020 S/0075/63/018/005/0588/0595

AUTHOR: Chmutova, M. K.; Petrukhin, O. M.; Zolotov, Yu. A. 59 53

TITLE: Extraction of plutonium and other elements with n-benzoylphenyl-hydroxylamine

SOURCE: Zhurnal analiticheskoy khimii, v. 18, no. 5, 1963, 588-595

TOPIC TAGS: extraction of plutonium, extraction of niobium, extraction of zirconium

ABSTRACT: The extraction of plutonium (IV) with N-benzoylphenylhydro-oxylamine (BPHA) from sulfuric, nitric and hydrochloric acid solutions have been studied. It has been shown that plutonium is readily extracted with 0.4M reagent solution in chloroform from 1 to 6M nitric acid solutions after a short-time contact of the organic and aqueous phases. Plutonium is only slightly extracted from hydrochloric and sulfuric acid solutions. A study has been made of the effect of the BPHA concentration, the duration of phase contact, and of certain foreign ions on the plutonium extraction from nitric acid solutions. The study was also made of uranium (VI), americium, neptunium (V) and neptunium (VI) fission products under the optimum conditions for plutonium separation. It was shown that practically

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L 10617-63

ACCESSION NR: AP3001020

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no extraction of uranium, americium, neptunium (V) and of the major part of the fission products takes place under these conditions. Only zirconium and niobium are extracted. After the initial extraction with 0.4M BPHA solution from 3M nitric acid plutonium is extracted with sulfuric acid leaving zirconium and niobium behind. Plutonium can be measured radiometrically. This method can be applied to separate pairs: plutonium-uranium and plutonium-americium. "The authors express their gratitude to P. M. Paleyu and I. P. Alimarina for their attention to this work and for their advice and to Yu. A. Surkov, G. M. Chernov and V. G. Karpushin for the measurement of Alpha and Gamma spectra, and G. A. Vorob'eva for her help with the experiment." Orig. art. has: 6 tables and 4 graphs.

ASSOCIATION: none

SUBMITTED: 28Sep62 DATE ACQD: 12Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 008 OTHER: 012

first ltr

Card 2/2

PETRUKHIN, O.M.

Conference on the use of extraction in analytical chemistry. Zhur.neorg. khim. 7 no.7:1754-1756 Jl '62. (MIRA 16:3)
(Extraction (Chemistry)--Congresses) (Chemistry, Analytical)

ALIMARIN, I.P.; ZOLOTOV, Yu.A.; PETRUKHIN, O.M.

"Separation of heavy metals" by A.K.De. Reviewed by I.P.Alimarin, IU.A.Zolotov, O.M.Petrukhin. Zhur.anal.khim. 17 no.6:772 S '62. (MIRA 16:1)

(Metals—Analysis) (De, A.K.)

PETRUKHIN, O. M.

Dissertation defended for the degree of Candidate of Chemical Sciences at the Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy in 1962:

"Extraction of the N-benzoylphenylhydroxylaminates of Niobium, Tantalum, and Several Other Elements."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

ALIMARIN, I.P.; PETRUKHIN, O.M.

Extraction of niobium and tantalum N-benzoylphenylhydroxylaminates. Zhur.neorg.khim. 7 no.5:1191-1196 My '62. (MIRA 15:7)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR.
(Niobium) (Tantalum) (Complex compounds)

ALIYAMIN, I.P.; PETROKHIN, O.M.

State of niobium and tantalum in tartaric acid solutions. Zh. neorg. khim. [illegible] (MIRA [illegible])

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo Akademii nauk SSSR.
(Niobium) (Tantalum) (Tartaric acid)

ALIMARIN, I.P.; PETRUKHIN, O.M.; TSZE YUN'-SYAN [Chien Yün-hsiang]

Separation of niobium and tantalum by the extraction of a niobium N-benzoylphenylhydroxylamine complex. Dokl.AN SSSR 136 no.5:1073-1074 F '61. (MIRA 14:5)

1. Institut geokhimii i analiticheskoy khimii im. V.I.Vernadskogo AN SSSR. 2. Chlen-korrespondent AN SSSR (for I.P.Alimarin).
(Tantalum) (Niobium compounds) (Hydroxylamine)

S/078/62/007/002/011/019
B145/B110

AUTHORS: Alimarin, I. P., Petrukhin, O. M.

TITLE: The state of columbium and tantalum in tartaric acid solutions

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 2, 1962, 401 - 406

TEXT: The state of Cb and Ta in 3% tartaric acid solutions was studied by ion exchange, extraction and dialysis. [illegible]-10 (EDE-10P) anionite and [illegible]-2 (KU-2) cationite were used as ion exchangers. The sorption coefficient K_d was calculated by the equation K_d = (% of sorbed metal · V)/(100 - % of sorbed metal)·m, where V = volume of solution, ml, and m = amount of exchanger, g. Cb^{98} and Ta^{182} were used as tracers (Figs. 1,2). Tests with Ta in 3% trihydroxy glutaric acid at c_{Ta} = 0.25 mg/ml yielded a sorption minimum at pH ~ 7. In 3% oxalic acid at $c_{Cb} = 5 \cdot 10^{-2}$ mg/ml a sorption minimum at pH ~ 6 was observed. The percentage of colloidal forms (by dialysis measurements using Cellophane membranes) present in 3% tartaric

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The state of columbium and

acid solution (pH 3, c_{metal} = 0.25 mg/ml) was determined at 15 - 20% for Cb, and 50 - 55% for Ta. Extraction from 3% tartaric acid solutions (0.25 mg Cb, resp. Ta/ml) by means of alcoholic 10% triphenyl guanidine hydrochloride solution + nitro-benzene was optimum at pH 2 - 3. Ta was found to form a precipitate at the interface, particularly at pH 2. It follows that over the entire pH range studied, both Cb and Ta, in particular, are present only in the form of anions (the cationite does not absorb Cb at pH 3 - 5, or Ta at pH 6.5 - 7), i.e. monomeric, and, especially with Ta, in colloidally dispersed form (with Cb in the pH range 3.5 - 5, and with Ta in the pH range 4 - 8). The different behavior of Cb and Ta with increasing concentration (Fig. 5) is due to the different hydrolytic stability of the respective tartaric acid complexes. Cb may be masked by Ta, since Ta is present in colloidally dispersed form already at $c_{Ta} = 6.8 \cdot 10^{-2}$ mg/ml, Cb, however, only above $c_{Nb} = 2.5 \cdot 10^{-1}$ mg/ml. Boiling of the solutions prior to sorption destroys the colloids and increases sorption (by about 20% after 1 hr boiling). The extraction of Cb and Ta tartaric acid complexes by

Card 2/

triphenyl guanidine hydrochloride might be used for separating the metals (at pH 3, extraction of Cb is 100%, and that of Ta approximately 60%. There are 6 figures, 1 table, and 21 references: 11 Soviet and 10 non-Soviet. The four most recent references to English-language publications read as follows: N. R. Srinivasan. Proc. Ind. Acad. Sci., 36A, N 4, 278 (1952); F. Fairbrother, J. B. Taylor. J. Chem. Soc., 4946 (1956); F. Fairbrother, D. Robinson, I. B. Taylor. J. Inorg. Nucl. Chem. 8, 296 (1958); M. Haissinsky, Yang Jeng-Tsong. Analyt. chim. acta, 4, 328 (1950).

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the Academy of Sciences USSR)

SUBMITTED: January 30, 1961

Card 3/3

PETRASHIN, O.M., ALIMARIN, I.P.

"Extraction of inner complex comp. and rare elements with N Benzoylphenylhydroxylamine."

Report to be submitted for the Intl. Belgr. Anniversary Symposium on Analytic Chemistry
Edgbaston, Birmingham, Great Britain [illegible] Apr 1960.

CHMUTOVA, M.K., PETRUKHIN, O.M., ZOLOTOV, Yu.A.

Extraction of inner-complex [illegible] of platinum and other elements with N-benzoylphenylhydroxylamine. Zhur. anal. khim. 18 no.4:588-595 My '63. (MIRA 16:7)

PETRUKHIN, O.M.[translator]; RODIN, S.S.[translator]; ZOLOTOV, Yu.A., kand. khim. nauk, red.; ANIOL'DOV, V.V., red.; GRIBOVA, M.P., tekhn. red.

[Extraction in analytical chemistry and radiochemistry] Ekstraktsiia v analiticheskoi khimii i radiokhimii. Moskva, Izd-vo inostr. lit-ry, 1961. 350 p. (MIRA 15:4)
Translated articles.
(Extraction (Chemistry)) (Radiochemistry)

USSR/Cultiva[illegible] - [illegible]

Abs Jour : [illegible]

Author : [illegible], O.I.

Inst : [illegible]

Title : [illegible]

Orig Pub : Tr. [illegible], 1957, 10, 176-181.

Abstract : [illegible]

Card 1/2

L 7868-66

ACC NR: AP5017031 SOURCE CODE: UR/0209/65/000/007/0024/0028

AUTHOR: Yermakov, V. (Colonel; Military pilot first class; Docent; Candidate of military sciences); Petrukhin, P. (Engineer; Lieutenant colonel)

61
B

ORG: none

TITLE: Search for targets of opportunity

SOURCE: Aviatsiya i kosmonavtika, no. 7, 1965, 24-28

TOPIC TAGS: target recognition, air force tactic, aerial reconnaissance, bombing tactic, target discrimination, target acquisition, detection probability

ABSTRACT: In an article based on tactical training experience acquired in aviation units, two military experts discuss sweep and destroy techniques. A search for targets of opportunity may be executed either by a linear or by a grid sweep maneuver, as necessitated by the tactical situation. The two-seater aircraft is superior to the single-seat aircraft in this application since it has an increased search area and a large overlap zone (see Fig. 1). With the use of a pair of two-seater aircraft (see Fig. 2),

Card 1/4

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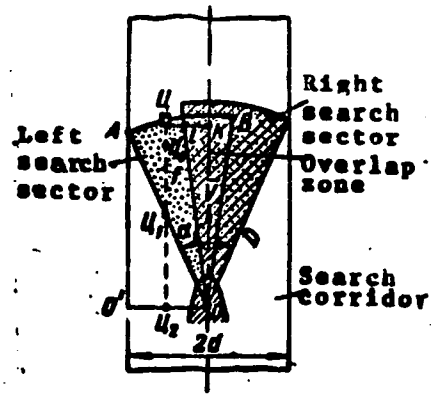

Fig. 1. Search corridor of a single two-seater aircraft

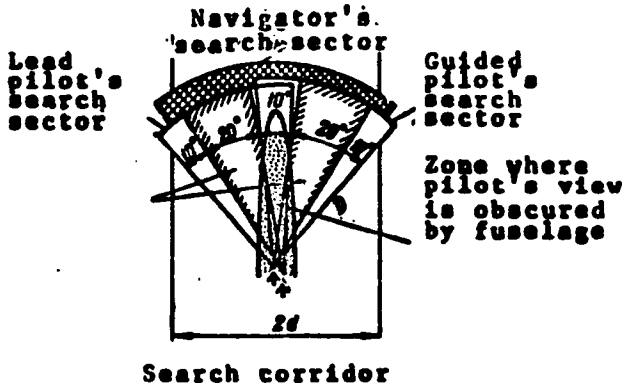

Fig. 2. Search corridor of a pair of two-seater aircraft

the conditions for conducting a search are still more favorable, since near the secondary-overlap sector there appears a tertiary-overlap sector. This occurs as a result of the superposition upon each other of the search sectors of the leading and the following aircraft and the zones covered by the navigators.

The area which must be inspected in order to search out and destroy a target may be determined by the formula

$$S = 0.00873\ V_t^2 \cdot T^2 \cdot \alpha^\circ.$$

where T is the time plotted from the moment the target is detected to the moment the bomber reaches this area, and V_t is the speed required for the target to cover the distance, assuming that immediately after the target's detection it enters into sector α°.

The probability P of a single crew detecting a target can be determined by the formula

$$P = 1 - e^{-\lambda_1 \cdot S(1-K_M)},$$

L 2868-66
ACC NR: AP5017031

where S is the area searched by the crew, λ_1 is the target density per area, K_m is the target-camouflage coefficient ($K_m = 0$ for targets which contrast with the landscape, and $K_m = 1$ for a target which cannot be distinguished from the landscape). If n crews are conducting the search, each of which is observing the area S, and the areas do not overlap, the probability of detecting a single target can be expressed by

$$P = 1 - e^{-\lambda_1 \cdot S (1 - K_m)^n}.$$

To insure the effectiveness of the search, an optimal search area per aircraft must be assigned. This can be determined from the nomogram in Fig. 3, using

$$\lambda_1 = \frac{N_t}{ab} \; ; \quad \lambda_2 = \frac{N_b}{ab},$$

where N_t is the number of targets, N_b is the number of antiaircraft guided-missile batteries, a & b are the dimensions of the operational theater (frontal and in depth), and W is the hit probability. Orig. art. has: 6 figures. [ATD Press: 4138-F]

SUB CODE: 15, 17 / SUBM DATE: none

Card 4/4

L 45899-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AR6016756 SOURCE CODE: UR/0277/66/000/001/0034/0034

AUTHOR: Voronin, M. I.; Petrukhin, P. A.

TITLE: Static and dynamic strength of reinforced plastics

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 1.48.203

REF SOURCE: Sb. tr. Mosk. vyssh. tekhn. uch-shcha im N. E. Baumana, v. 4, 1964, 29-39

TOPIC TAGS: reinforced plastic, phenolic plastic, glass textolite, fiber

ABSTRACT: The authors determined the strength characteristics under compression and bending and during fatigue testing for textolite, fiberplastic and AG-4V fiberglass-reinforced plastic, and also the experimental coefficients A and α appearing the equation $\tau_{cr}=Ae^{-\alpha\sigma}$ which expresses strength as a function of the action time of a load σ at a constant temperature (τ_{cr} is the time to destruction under constant stress σ). This relationship, which was derived for pure polymers, is verified for reinforced polymers. Within certain intervals, the phenol polymer materials studied conform to the time relationship accepted for linear polymers. The experimental coefficients A

Card 1/2 UDC: 678.5-419:677.521:539.4

ACC NR: AR6016756

and α are determined to a considerable degree by the technological conditions observed during preparation of the specimens, their geometric shape, the type of filler and the form of loading which is applied. An increase in strength results in an increase in coefficients *A* and α. [Translation of abstract]

SUB CODE: 11

Card 2/2

L 08472-67 EWP(j)/EWT(m) IJP(c) RM/AW

ACC NR: AR6016476 SOURCE CODE: UR/0124/65/000/012/V098/V098

24
B

AUTHOR: Voronin, M. I.; Petrukhin, P. A.

TITLE: Static and dynamic strength of reinforced plastics

SOURCE: Ref. zh. Mekhanika, Abs. 12V841

REF SOURCE: Sb. tr. Mosk. vysch. tekhn. uch-shcha im. N. E. Baumana, v. 4, 1964, 29-39

TOPIC TAGS: reinforced plastic, fiberglass, phenolic plastic

ABSTRACT: Strength characteristics were determined under compression, bending and fatigue testing in textolite, fibrite and AG-4V fiberglass-reinforced plastic, and the experimental coefficients A and α are found in the equation $t^* = Ae^{-\alpha\sigma}$ which gives destruction time t^* as a function of stress σ at constant temperature. This relationship is true for pure polymers and is verified for reinforced polymers. It is concluded that the phenol polymer materials which are investigated conform in certain ranges to the time relationship accepted for linear polymers. The experimental coefficients A and α are dependent to a considerable degree on the technological conditions used in preparation of the specimens, the type of filler, geometric shape and form of applied load. It is pointed out that an increase in strength results in higher A and α. V. Kolesnik. [Translation of abstract]

SUB CODE: 11

Card 1/1

PETRUKHIN, P.I.

A method for the determination of maximal arterial pressure. Klin. med. 28 no.5:87-88 May 50. (CLML 19:4)

1. Kazan'.

PETRUKHIN, Petr Afanas'yevich, kapitan 3 ranga, voyennyy zhurnalist;
TONKOV, A.A., red.; ANIKINA, R.F., tekhn.red.

[On an exemplary cruiser] Na otlichnom kreisere. Moskva, Voen. izd-vo M-va obor.SSSR, 1959. 79 p. (MIRA 13:6)
(Russia--Navy)

PETRUKHIN, P. I.

"Arterial Blood Pressure of Horses Under Normal Conditions and During Certain Diseases." Cand Vet Sci, Kazan' State Veterinary Inst, Kazan', 1953. (RZhBiol, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

PETRUKHIN, [illegible]. I.

Bloodless operation in lacteal fistulas.

SO: TARCON Veterinariya; 23; [illegible]; August/September [illegible]

Veterinarian, Kanash Veterinary Polyclinic

SHANOVSKAYA, S.S.; RASSOLOV, N.I., BEKIRBAYEV, B.D. [deceased]; PETRUKHIN, P.M.; GR...; ...; FR...OV, M.A.; CHERVINSKIY, M.S.; BOBRITSKIY, V.P.; P...LYANSKIY, I.P.; NIKITIN, V.S., otv. red.; LUCHK... V.S., red. ... VA... ...YAR, S.Ya., tekhn. red.; MAKSIMOVA, V.V., tekhn. red.

[Handbook on controlling dust in coal mines] Spravochnoe posobie po bor'be s pyl'iu v ug...nykh shakhtakh. [By S.S. Shanovskoi i dr.] Moskva, Gosgortekhizdat, 1963. 190 p. (MIRA 16:6)

(Mine dusts)

PETRUKHIN, Petr Mitrofanovich; MIKHALENKOV, S.P., otv. red.; OKHRIMENKO, V.A., red. izd-va; IL'INSKAYA, G.M., tekhn. red.; BERESLAVSKAYA, L.Sh., tekhn. red.

[Prevention of silicosis and anthracosis in mines] Profilaktika silikoza i antrakoza na shakhtakh. Moskva, Gos. nauchno-tekhn. izd-vo po gornomu delu, 1960. 55 p. (MIRA 14:5)
(LUNGS --DUST DISEASES)

LYUBIMOVA, A.I., inzh.; PETRUKHIN, P.M., inzh.

Hydrophobic inert dust. Bezop. truda v prom. 2 no.2:7-8 F '58.
(MIRA 11:2)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.
(Dust)

PETRUKHIN, P.M.; RASSOLOV, N.I.

Study of methods of preventing and localizing explosions of coal dust in the section of development workings being mixed. Vop. bezop. v ugol'. shakh. 13:150-174 '62. (MIRA 16:5)

(Mine explosions)

PETRUKHIN, P. M. ~~Doc~~ Cand Tech Sci -- (diss) "Study of ~~the~~ methods of the use of ~~the~~ ~~inactive~~ dust for ~~the purposes~~ of ~~warning~~ and ~~extinction~~ of explosions of coal dust in ~~coal~~ mines." Makeyevka-Donbass, 1956. 16 p 22 cm. (Min of Higher Education Uk SSR. Dnepropetrovsk Order of Labor Red Banner Mining Inst im Artem), 120 copies

(KL, 21-57, 103)

BEKIRBAYEV, D.B.; GRODEL', G.S.; GUL'SHIN, P.A.; KLEPIKOVA, M.S.; PETRUKHIN, P.M.; POLYANSKIY, I.P.; RASSOLOV, N.I.; TARASOVA, A.A.; FERTEL'-MEYSTER, Ya.N.; CHERVINSKIY, M.S.; SHANOVSKAYA, S.S.; KLIMANOV, A.D., otv.red.; ZHUKOV, V.V., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.red.

[Coal and rock dust control in mines] Bor'ba s ugol'noi i porodnoi pyl'iu v shakhtakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 499 p. (MIRA 13:6)
(Mine dusts) (Coal mines and mining--Safety measures)

15-57-10-14985D

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 278 (USSR)

AUTHOR: Petrukhin, P. M.

TITLE: Investigation of Methods of Applying an Inert Dust as a Medium for Preventing and Extinguishing the Explosions of Coal Dust in the Mines (Issledovaniye sposobov primeneniya inertnoy pyli kak sredstva preduprezhdeniya i gasheniya vzryvov ugol'noy pyli v shakhtakh)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to Dnepropetr. gorn. in-t (Dnepropetrovsk Mining Institute), Makeyevka-Donbass, 1956.

ASSOCIATION: Dnepropetr. gorn. in-t (Dnepropetrovsk Mining Institute)

Card 1/1

PETRUKHIN, P.M.; LYUBIMOVA, A.I.

Moisture-resistant inert dust for mines. Biul.tekh.-ekon.inform no.8:3-4 '59 (MIRA 13:1)
(Mine dusts—Safety measures)

BEKIRBAYEV, D.B.; GRODEL', G.S.; GUL'SHIN, P.A.; KLEPIKOVA, M.S.; PETRUKHIN, P.M.; POLYANSKIY, I.P.; RASSOLOV, N.I.; TARASOVA, A.A.; FERTEL'MEYSTER, Ya.N.; CHERVINSKIY, M.S.; SHANOVSKAYA, S.S.; KLIMANOV, A.D., otv.red.; ZHUKOV, V.V., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.red.

[Control of coal and rock dust in mines] Bor'ba s ugol'noi i porodnoi pyl'iu v shakhtakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 499 p. (MIRA 13:3)
(Mine dusts)

PETRUKHIN, P.M.

Accumulation of methane in the coal bunkers of coal beneficiation plants P. M. Petrukhin and I. P. Polyanskii (Ugol', 29, No. 1, 9-10 (1954)).—A no. of cases of methane ignition in coal bunkers has been observed. Methane was [illegible]

MeKNII

KSENOFONTOVA, Anna Ivanovna, BURCHAK, Anatoliy Semenovich. Prinimali uchastiye: PETRUKHIN, F.N., kand. tekhn. nauk; ONTIN, Ye.I.,

[Theory and practice of dust control in coal mines] Teoriia i praktika bor'by s pyliu v ugol'nykh shakhtakh. Moskva, Nedra, 1966. 230 p. (MIRA 18:12)

GAYDUCHENKO, B.I.; TULENKOV, K.I.; PETRUKHIN, S.I.

Effect of additional treatment on the internal stresses in rope wire. Izv.vys.ucheb.zav.; chern.met. 8 no.6:108-112 '65. (MIRA 18:8)

1. Magnitogorskiy gornometallurgicheskiy institut.

L 18727-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3006527 S/0133/63/000/009/0840/0840

54
52

AUTHOR: Petrukhin, S. I.

TITLE: Cable-wire studies leading to the development of methods for estimating wire behavior

SOURCE: Stal', no. 9, 1963, 840

TOPIC TAGS: cable wire, cable, fatigue, elasticity, plasticity

ABSTRACT: A new formula based on wire fatigue studies is proposed. The formula determines the durability of metal under periodically repeated loads and is expressed as:

$$N = \frac{a}{\frac{\Sigma|T(t_{i+1}) - T(t_i)|}{M}(M - M_0)^3} \qquad (1)$$

where N is the number of loadings repeatedly applied prior to metal failure; $T(t_i)$ is an experimentally determined value of a function involving the deformative tensor and the fatigue limits resulting from alternating torsion and bending

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L 18727-63

ACCESSION NR: AP3006527

2

stresses; M is a function of $T(t_i)$ and of parameters related to the texture of metals; M_0 is mean value of metal fatigue; δ is a constant. The formula assumes the no-friction and no-corrosion conditions for individual wires, and it correlates the durability of cables to the plasticity and fatigue resistance of wires. Plasticity of cables should be designated not by the number of bendings prior to failure but by a relative limit of strength $\delta_{0,01}$. If the ratio of this value to the limit of strength (180 kg/mm) is lowered from 0.7 to 0.55, then the durability of cables is doubled. Orig. art. has: 1 formula.

ASSOCIATION: Magnitogorskiy nauchno-issledovatel'skiy institut metiznoy promy*shlennosti (Magnitogorsk Scientific Research Institute of Cable-Braiding Industry)

SUBMITTED: 00 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: MA, ML NO REF SOV: 000 OTHER: 000

Card 2/2

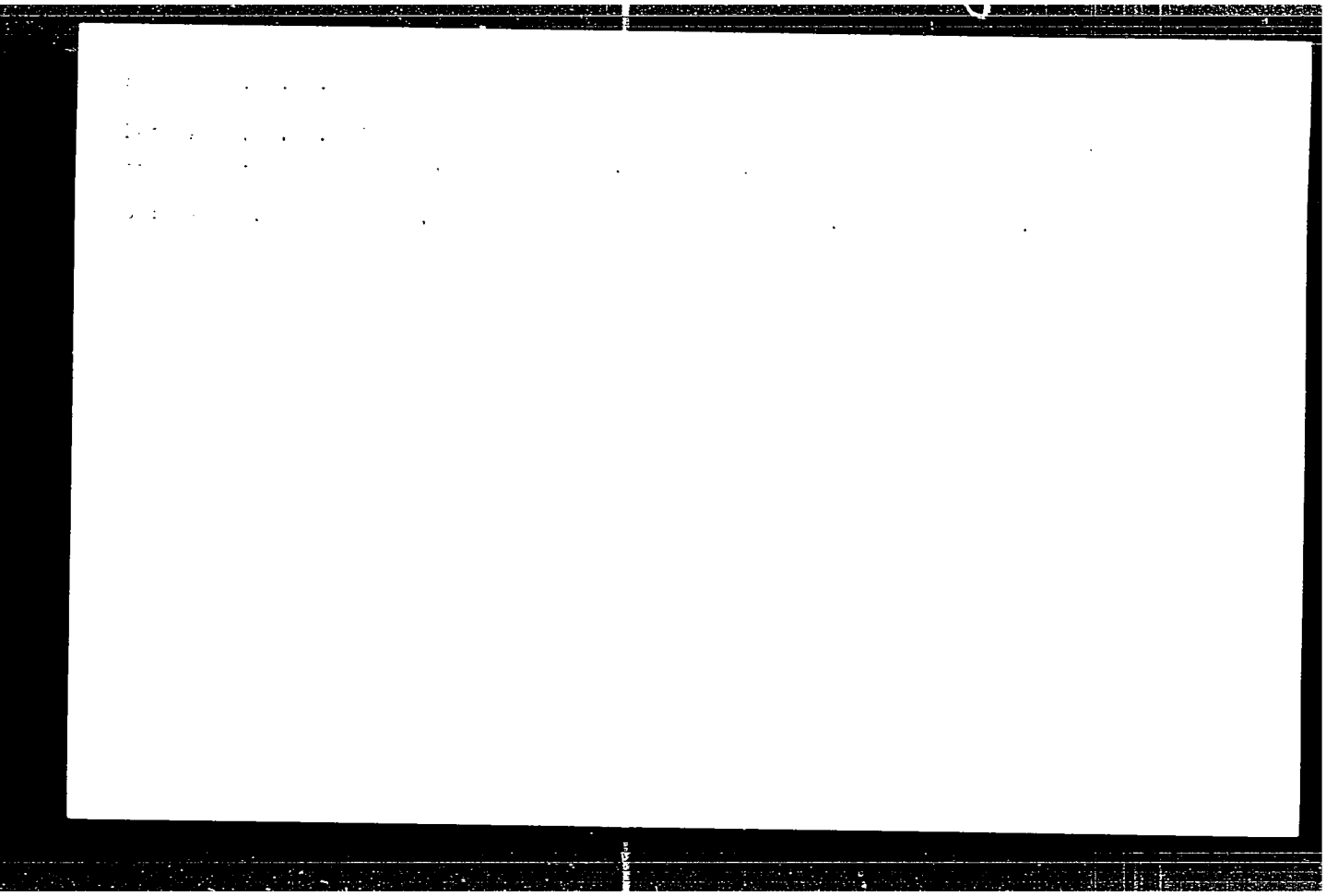
PETRUKHIN, S.I.

New developments in research. Stal' 23 no.9:840 S '63.
(MIRA 16:10)

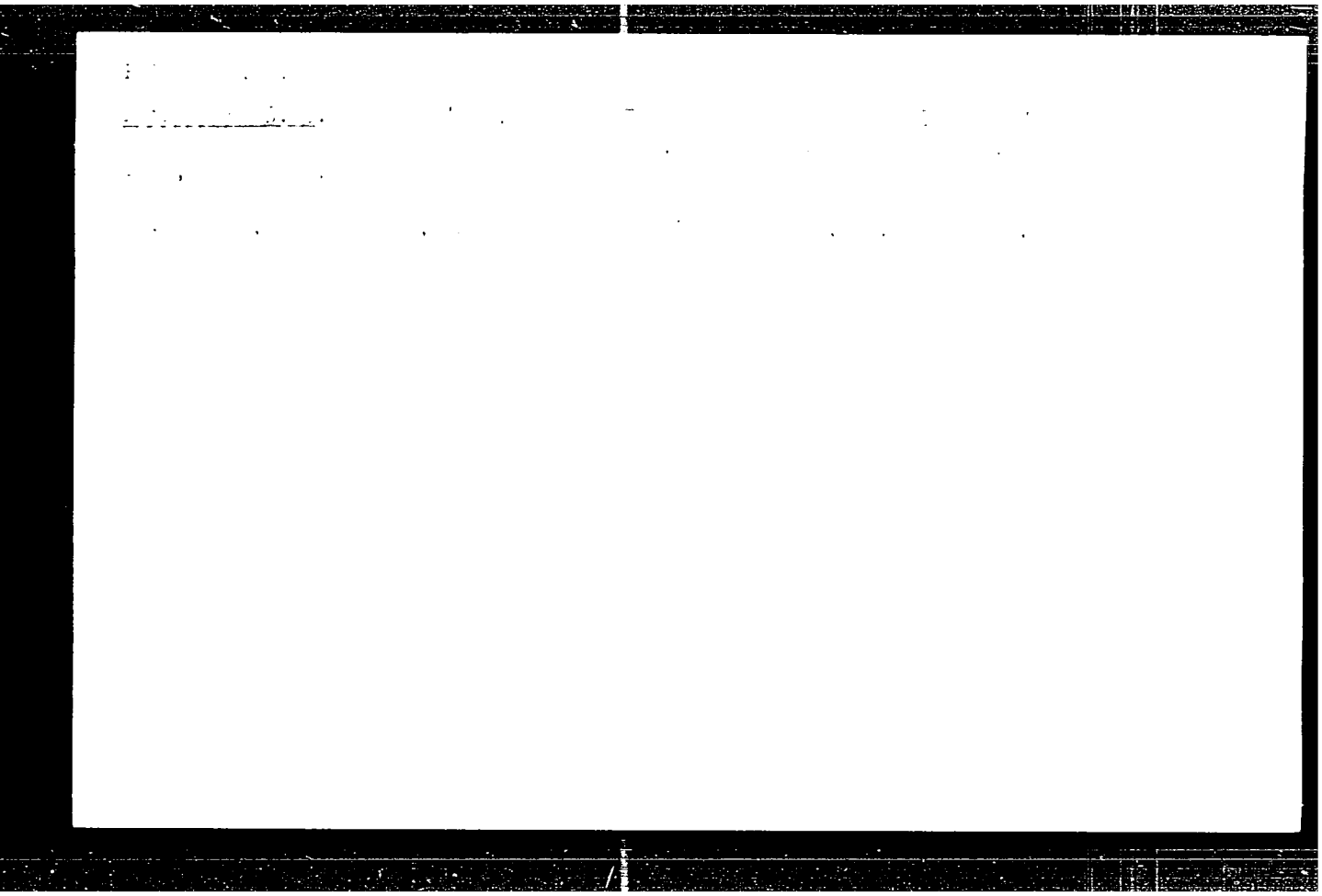
TYLENKOV, K.I.; PETRUKHIN, S.I.; GAYDUCHENKO, B.I.

Analyzing the distribution of residual stresses in pipe ends.
Izv. vys. uchebn. zav.; chern. met. no.1 [illegible]
[illegible]

1. Magnitogorskiy gornometallurgicheskiy institut.



APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240620011-4"



FC Vecheryaya Moskva
Sum 71

GEYLIKMAN, A.I.; KARNEYEV, V.F.; KOGANOV, I.A.; PETRUKHIN, S.S.; SEMIN, V.S.

Semiautomatic machine for manufacturing chains for the "Tula" sewing machines. Mashinostroitel' no.11:11-13 N '59. (MIRA 13:3)
(Machine tools) (Sewing machines)

PHASE I BOOK EXPLOITATION SOV/4921

Petrukhin, Sergey Semenovich, Candidate of Technical Sciences, Docent

Osnovy proyektirovaniya rezhushchey chasti metallorezhushchikh instrumentov; kinematicheskaya teoriya (Fundamentals of Designing the Cutting Portion of Metal-Cutting Tools; Kinematic Theory) Moscow, Mashgiz, 1960. 162 p. Errata slip inserted. 4,000 copies printed.

Reviewer: Yu. V. Tsvis, Doctor of Technical Sciences; Ed. of Publishing House: N. A. Ivanova; Tech. Ed.: V. D. El'kind; Managing Ed. for Literature on Metalworking and Machine-Tool Building: V. I. Mitin, Engineer.

PURPOSE: This book is intended for engineers, technicians, and designers at plants, design offices, and scientific research institutes dealing with the problems of designing cutting tools. It may also be used by aspirants and by students attending schools of higher technical education.

COVERAGE: The author discusses the principles of the kinematic relationship between the form of the cutting portion of the tool and the form of the surface of the part being machined. These principles permit an analysis of the cutting process, the improvement of existing tools, and the design-

Card 1/7

Card 2/7

14000

S/145/60/000/0[illegible]/010/010
D221 D301

AUTHOR: Petrukhin, S.S. [illegible] of Technical Sciences, Docent

TITLE: The elements of the kinematic theory of cutting edge of meta[illegible]

PERIODICAL: Izvestiya vysshikh [illegible] Mashinostroyeniye, [illegible]

TEXT: The elements of the kinematic theory for designing the cutting edge of tools are as follows: The motions produced by the cutting edge and their relationships and the effect of these motions on the working conditions of the cutting edge, or on the position of the cutting surface in relation to the surface of the cutting edge. The course of machining should be considered during one pass which includes the feed and the speed of machining. The chip separation can be ensured with a certain ratio of both. Their limit ratio forms the kinematic criterion of possibility of chip separation. In addition, the arrangement has the method to obtain the individu-

Card 1/3

S 145/60/000/003/010/[illegible]
D201/D301

The elements of the kinemati

al parameters of surfa[illegible] and speed do not ensure production of specified [illegible]tion for increase of machining output, and motion [illegible] elements of cutting edge in working conditions are [illegible] kinematic parameters of machining. Irregular spee[illegible] termined by several factors. In most cases it is [illegible] a constant speed of cutting edge. Analys[illegible] serve to assess the design of the too[illegible]. For establishing the relationship between the [illegible] edge and the motions during which the machined [illegible] formed, it expedient to use the method of expressing the [illegible] are tangent to the surfaces of the cutting edge, by tech[illegible] kinematic parameters of forming these surfaces the tangent [illegible] can be determined by the vector of speed [illegible] of the tool point and a straight line that is tangent [illegible] cutting edge at the same point. The coordination of surfaces of the cutting edge with the machined surface should be made by front and back angles in a plane perpendicular to the cutting edge, and also the angle of inclination of the latter. The normal to the surface of machining in intersection point of vector of speed, and the track of the tangent to the cut-

Card 2/3

S 148/60/000/003/010/010
D262/D301

The elements of the kinemati[illegible]

ting point is $N_0 = \bar{v} \cdot \bar{\kappa}$. When the [illegible] coordinates is in the above point, then the tangent p[illegible] will be $\bar{N}_0 \cdot \bar{r} = 0$. After indicating the analogy for the surface tangent to the front surface, the author obtains the front and [illegible] equation, as well as the inclination of the cutting edge in the tangent plane of the machining surface. The position of [illegible] ting edge [illegible] respect to the main elements of tool is consta[illegible] The position of the surface of machining in relation to the surfaces of cutting edge is determined by angles γ, α and λ. By comparing the latter with different combinations of motions and indices it is possible to reveal the effect of each motion index on work conditions, and thus ensure optimum results.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute)

SUBMITTED: December 4, 1959

Card 3/3

PETRUKHIN, S.S., dotsent, kand.tekhn.nauk

Classification of movements of metal-cutting tools according to their purpose in machining. Izv.vys.ucheb.zav.; mashinostr. no.5:106-111 '60. (MIRA 13:7)

1. Tul'skiy mekhanicheskiy institut.
(Metal cutting)

S/003/60/000/007/002/002
B023/B077

AUTHORS: Petrukhin, S. S., Shaydenko, A. Ya., Candidates of Technical Sciences, Docents

TITLE: Intercollegiate scientific conference

PERIODICAL: Vestnik vysshey shkoly, no. 7, 1960, 40-43

TEXT: In a number of technical institutes (the MVTU, the Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute), Moskovskiy avtomekhanicheskiy institut (Moscow Automechanical Institute), Moskovskiy Stanko-instrumental'nyy institut (Moscow Institute of Machine Tools and Instruments), the Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute), the Odessa, Tomsk and Donets politekhnicheskiy institut (Polytechnic Institutes), the Moskovskiy institut stali (Moscow Steel Institute), the Khar'kov, Tula and Sverdlovsk gornyy institut (Mining Institutes), the Vsesoyuznyy zaochnyy energeticheskiy institut (All-Union Correspondence Power Engineering Institute) research has already yielded important results. By the order of the Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR (Ministry of Higher and Specialized

Card 1/5

Intercollegiate scientific conference

S/003/60/000/007/002/002
B023/B077

Secondary Education of the Russian Socialist Federative Soviet Republic) an intercollegiate scientific conference was held in Tula on automation in production and on automatic machines. 350 conference participants representing 76 industrial organizations and institutes in Moscow, Leningrad, Khar'kov, Novosibirsk, Gor'kiy, Chelyabinsk, Penza, Sverdlovsk Vladivostok, Kiyev, Perm', Rostov and other cities were present The participants worked in six sections. Over 60 lectures were given 115 persons took part in the discussion which followed. S. I. Artobolevskiy, Doctor of Technical Sciences, Professor lectured on "Theoretical principles of comprehensive automation of production processes" D. V. Charnko (Moscow Institute of Machine Tools and Instruments) spoke on "The structural system of the development of technological operations and its principles". B. M. Podchufarov, Candidate of Technical Sciences, Docent (Tula Mechanical Institute) lectured on "Dynamics of the cyclic automation". A. A. Andronov, Academician spoke on dynamics of machines in general, as found in studies of cyclic automation L. N. Koshkin, Candidate of Technical Sciences, Docent, lectured on "Automation of production methods, based on rotor lines". At the Odessa Polytechni

Card 2/5

Institute under A. P. Voloshchenko, Candidate of Technical Sciences, Docent, studies are being conducted aiming at the analysis of the theory of mass operation. V. F. Preys, Candidate of Technical Sciences, Docent at the Tula Mechanical Institute spoke on bunker charging of automatic assembly lines. Results of studies of automatic roter machines (constructed by L. N. Koshkin) were discussed by I. A. Klusov and V. F. Preys, both instructors, Candidates of Technical Sciences (Kafedra "Oborudovaniye shtampovochnogo proizdvodstva" (Department for "Equipment for Stamping Production")). Ye. N. Frolovich, Aspirant, spoke on automation based on rotor lines in the field of synthetic products. A. I. Zimin, Doctor of Technical Sciences, Professor, and A. S. Yezzhev, Engineer, (MVTU) reported on problems in the automation of synthetic pressings. I. M. Kratenko, delegate of the Tula economic administrative rayon reported on the mechanized protection devices in the mines of "Tulaugol" Combine. The studies of the Department of Calculation and Construction of Mining Machines of the Tula Mechanical Institute, conducted in cooperation with Kopeyskiy mashinostroitel'nyy zavod (Kopeysk Machine Building Factory), were discussed. Furthermore, the results of the studies of the Sverdlovsk gornyy institut (Sverdlovsk

Intercollegiate scientific conference

S/003/60/000/007/003/003
B023/B077

Mining Institute), Donetskiy politekhnicheskiy institut (Donets Polytechnic Institute), Tula Mechanical Institute, Gornyy Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnic Institute of Mining) and of the Institut Ukr NIIPROYEKT Gosplana UkrSSR were checked with respect to automation. V. N. Podurayev, Candidate of Technical Sciences, Docent, talked on "Vibration loops of metals in automatic production lines and automatic workbenches" I. A. Koganov, Candidate of Technical Sciences, Docent, (Tula Mechanical Institute) treated a similar subject. At the last general meeting O. A. Chukanov, Docent, Secretary of the Tul'skiy obkom KPSS (Tula District Committee of the CPSU) lectured on the possibilities of automation and mechanization of the Tula rayon. A resolution established that the success does not fully satisfy the daily needs. There are not enough laboratories and skilled workers at the district institutes. Constructive suggestions were made by E. A. Satel', Doctor of Technical Sciences, Professor; B. S. Balakshin, Doctor of Technical Sciences, Professor. The delegates decided 1) to improve the training of engineers in this field; 2) the Ministry of Higher and Secondary Specialized Education will be asked 1.

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Intercollegiate scientific conference

S/003/60/000/007/003/003
B023/B077

convene a methodical conference to check all problems concerning the subject. On the day the conference started all participants received a special edition of the magazine "About Manpower" (Chief Editor C. N. Vinogradov). It contains contributions of the Director of the Institute, S. S. Petrukhin, Candidate of Technical Sciences, Docent M. A. Mamontov, Ya. M. Khaymovich, Professor, M. I. Slobodkin, Doctor of Technical Sciences, S. A. Ragozin, Candidate of Technical Sciences, Docent, I. A. Klusov, B. M. Podchufarov, both Candidates of Technical Sciences, and A. Ya. Shaydenko, Candidate of Technical Sciences, Docent.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute)

Card 5/5

PETRUKHIN, S. S., Dr. Tech. Sci. (diss)"Investigation of Laws of Kinematic Bases for Design of Cutting Parts of Metal-cutting Instruments," Moscow, 1961, 32 pp (Moscow Lathe-Instrum. Inst.) 200 copies (KL Supp 12-61, 241).

PETRUKHIN, S.; KOZYREV, G.

Reference book not answering the tasks of fixing industrial norms ("Manual of unified time norms Automobile repair." Reviewed by S. Petrukhin, G. Kozyrev). Avt. transp. 34 no. 6:39 Je '56. (MLRA 9:9)

(Automobiles--Repair) (Time study)

PETRUKHIN, V., kand.voyennykh nauk, polkovnik

"History of the Great Patriotic War of the Soviet Union 1941-1945." Tyl i snab. Sov. Voor. Sil 21 no.12:87-91 D '61. (MIRA 15:1)

(World War, 1939-1945)

PETRUKHIN, V., kand.voyennykh nauk, polkovnik

Commander of the Stalingrad front on the work of the rear ("Stalingrad; memoirs of the front commander" by A.I.Eremenko. Tyl i snab.Sov.Voor.Sil 21 no.5:94-96 My '61. (MIRA 14:8) (Stalingrad, Battle of, 1942-1943) (Eremenko, A.I.)

T.USHCHENKO, A.A.; PETLICHNYY, V.F.

Vacuum chambers for the [illegible]. [illegible]
Avtom. svar. 17 no.2:[illegible]

L 7010-66 EWT(d)/EPA(s)-2/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/
ACC NR: AP5026800 EWA(c)/ETC(m) JD/ SOURCE CODE: UR/0286/65/000/017/0081/0081
WW/HM

INVENTOR: Ravevskiy, G. V.; Trushchenko, A. A.; Petrukhin, V. F.

ORG: none

TITLE: A device for checking the air tightness of welded joints. Class 42, No. 174405

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 81

TOPIC TAGS: welding inspection, leak detector

ABSTRACT: This Inventor's Certificate introduces a device for checking the air tightness of welded joints in hollow parts using an open chamber with elastic air-tight gaskets which is placed on the part to be inspected and then evacuated. The testing process is automated by suspending the chamber from the piston rods of two cylinders which are mounted on a movable trolley and used for holding the chamber to the surface of the article being checked by creating a vacuum in the cylinder cavities.

SUB CODE: IE/ SUBM DATE: 11Jul63/ ORIG REF: 000/ OTH REF: 000

UDC: 620.29 : 621-46 : 621.791.052

Card 1/2

L 7010-66

ACC NR: AP5026800

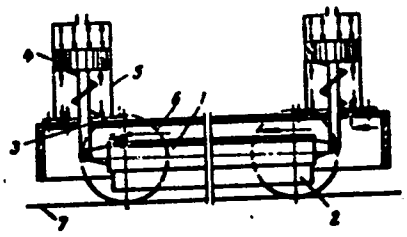

Fig. 1. 1 - chamber; 2 - gasket; 3 - rod; 4 - piston; 5 - cylinder; 6 - trolley; 7 - surface being inspected.

nw

Card 2/2

PETRUKHIN, V.G.; PINCHUK, V.M.

Myocardial changes in deep hypothermia following previous acclimatization to oxygen insufficiency. Eksp. khir. 3 no.6:27-31 N-D '58. (MIRA 12:1)

1. Iz kafedry patologicheskoy anatomii Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova (nauchnyy rukovoditel' raboty--prof. S. S. Vayl').

(HYPOTHERMIA, exper.
myocardial changes in hypoxic cats (Rus))
(MYOCARDIUM, physiol.
eff. of hypothermia in hypoxic cats (Rus))
(ANOXIA, eff.
eff. of hypothermia on myocardium in hypoxic cats (Rus))

ANICHKOV, N.N., akademik; ZAKHAR'YEVSKAYA, M.A., prof.; TISHKIN, N.A., doktor med.nauk; SARKISOV, D.S., doktor med.nauk; PETRUKHIN, V.G., kand. med.nauk; PINCHUK, V.M., kand.med.nauk

Solomon Samuilovich Vail'; obituary. Arkh.pat. 21 no.1:94-95 '59. (MIRA 12:1)

(OBITUARIES,
Vail', Solomon, S. (Rus))

PETRUKHIN, V.G.

Effect of sleep disorders on the course and outcome of disphosgene pulmonary edema. Arkh.pat. 21 no.8:45-49 '59. (MIRA 13:12)
(PULMONARY EDEMA) (SLEEP)

27 2700
27 1220

S/560/61/000/010/012/016
D238/D302

AUTHORS: Arsen'eva, M. A., Antipov, V. V., Petrukhin, V. G., L'vova, T. S., Orlova, N. N., and Il'ina, S. S.

TITLE: Changes in the blood-forming organs of mice under the effect of flight in a space-ship

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli no. 10 Moscow, 1961, 82-92

TEXT: A study was made of the effects of flights in a space-ship (the 2nd Sputnik) on the blood-forming organs of mice. An attempt was made to differentiate between the action of vibration, acceleration and X-rays. The experiments were carried out on 40 black C-57 (S-57) strain and white non-species mice. Their weight fluctuated between 18 - 22 g. The same group of animals was also used for the standard. All the animals returned from cosmic flight in good condition. Cytology and

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S/560/61/000/010/012/016
D248/D302

Changes in the

histology methods for investigating the brain and spleen were used. The peripheral blood and the morphology of the bone marrow were studied Experiments showed that there is a statistically valid frequency increase of mitosis destruction in the bone marrow cells of the experimental animals compared to the controls. Obtained data on chromosome destruction of mitosis in the cells of the bone marrow in mice having been in cosmic flight showed that these differed from the results obtained in X-radiation Two main differences were noted: (1) in cosmic flight, the frequency of chromosome destruction did not drop prior to the end of the experiment; (2) there was almost complete absence of fragmentation in chromosome changes The morphology studies of the bone marrow showed that in mice isolated for 30 days after returning to earth a sharp rejuvination of the myelopoesis was noted, expressed through an increased number of myeloblasts, promyelocytes, myelocytes Analysis of the peripheral blood showed no noticeable deviations from the

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S/560/61/000/010/012/014
D298/D302

Changes in the

controls. The hystology tests indicated that in the spleen of mice isolated for three days after the experiment the number of megacariocytes drops. Further analysis of the cytology and histology data revealed that certain changes were noted in the blood-forming organs of the mice after cosmic flight. It is assumed, however, that these changes occurred due to several factors in addition to cosmic radiation. Special tests to differentiate the effects of the various factors showed that cosmic flight caused changes in the blood-forming organs due to mechanical factors as well as primarily vibration. Listed data indicate that vibration is one of the main causes of bone marrow and spleen changes. The biological effectiveness of cosmic radiation and other flight factors is said to be still unknown, requiring further studies of cosmic radiation effects over long periods of time on biological specimens. There 6 figures, 3 tables and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as

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S/560/61/000/010/[illegible]
D208/D302

Changes in the

follows: F Devik, Brit J Radiol 27 163, 1954; G D Darlington, L F La Cour, J Heredity, Suppl 6, 1952

SUBMITTED: May 3, 1961

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S/865/62/001/000/010/033
E028/E185

AUTHORS: Arsen'yeva, M.A., Antipov, V.V., Petrukhin, V.G., L'vova, T.S., Orlova, N.N., and Il'ina, S.S.

TITLE: Changes in the haemopoietic organs of mammals under the influence of space flight

SOURCE: Problemy kosmicheskoy biologii. v.1. Ed. by N.M. Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 205-218

TEXT: In a study of the effect of cosmic radiation upon the haemopoietic system 40 mice of the C57 strain which had been on a space flight were killed at intervals up to 60 days after return and cytological preparations were made of the peripheral blood, spleen and bone marrow. Abnormalities of mitosis in the form of bridges and adhesions were observed in 7.12 - 10.78% of cells in anaphase and telophase, compared with 1.96 - 3.8% of abnormalities in preparations from control animals, and no decline in the proportion of affected cells had occurred by the end of the observation period. The findings differed in this respect from the effects of X-irradiation, where the proportion of chromosome

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abnormalities declines steadily and the usual finding is fragmentation of the chromosomes. No abnormalities were noted in preparations of the peripheral blood. Preparations of the spleen showed a decline in megakaryocytes after 3 days and shrinkage of follicles after 9 days, followed later by enlargement and the appearance of atypical cells. The chromosome abnormalities described could be largely duplicated by exposure of normal mice to vibration, which was probably of greater importance than cosmic radiation as a cause of abnormalities in animals undergoing space flights.
There are 6 figures and 5 tables.

S/865/62/002/000/012/042
D405/D301

AUTHORS: Arsen'yeva, M.A., Antipov, V.V., Petrukhin, V.G., L'vova, T.S., Orlova, N.N., Il'ina, S.S., Kabanova, L.A., and Kalyayeva, E.S.

TITLE: Cytologic and histologic changes in blood-forming organs of mice under the effect of space flight conditions

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by N. Sisakyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962, 116-127

TEXT: In the investigations, an attempt was made at differentiating between the effects of dynamic factors of flight such as vibration, acceleration and weightlessness. The experiments were conducted on males of black-linear (C^{57}) mice, and on white mice. A cytological analysis of the bone marrow cells revealed a disturbance of mitosis under the effect of space flight. It was found that the majority of chromosome abberations appeared not as a result

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of chromosome disruption, but through sticking together with possible subsequent anomalous separation. Morphological studies of the bone marrow showed, after 30 days, an increase in the number of myeloblasts, promyelocytes and myelocytes. Histologic investigations of the spleen of the mice showed, during the first days of the experiment, a decrease in the number of follicules and megacaryiocytes; towards the 30th day the number of the latter increased again and on the 60th day the blood formation was renewed. Special experiments were conducted in order to ascertain the specific effects of vibration, acceleration and weightlessness. It was found that Serotonin, introduced intraperitoneally into the mice 10 minutes before the experiment, was an effective means of protection against vibration damage of cells. Conclusions: Space flight caused disturbances in the bone marrow and spleen of mice that were recorded two days after the flight and lasted for a month. Both vibration and weightlessness experiments produced such alterations as chromosome fusion. Acceleration in a state of weightlessness can lead to a disruption in the spindle apparatus of the cell. It is evident that the effects of space flight on the cell constitute a complex problem, involving

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many factors. However, the biological action of cosmic radiation is altogether undetermined as yet, requiring further studies. There are 9 figures and 3 tables.

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PETRUKHIN, V.G.

Effect of the flight in spaceships on pathological and morphological changes in the internal organs of animals. Probl.kosm.biol. 2:128-139 '62. (MIRA 16:4)
(SPACE FLIGHT--PHYSIOLOGICAL EFFECT)

ACCESSION NR: AT4042708 S/0000/63/000/000/0394/0397

AUTHOR: Petrukhin, V. G.; Sokolova, M. M.

TITLE: Morphological changes induced by acceleration

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 394-397

TOPIC TAGS: acceleration effect, morphological change, transverse acceleration, dog, monkey

ABSTRACT: Dogs and monkeys were subjected to transverse accelerations in a series of four experiments. In the first series, dogs were subjected to transverse accelerations of 8 g for a period of 3 min. In the second series, they were subjected to 12 g for 1 min. In the third series, they were subjected to 12 g for 3 min. In the fourth series, male monkeys were subjected to 12 g for periods ranging from 3 to 5 min (depending on appearance of electrocardiographic changes). All animals were killed either immediately after the completion of the experiment or 1, 3, 7, 15, 30, and 60 days after the experiment. Morphological investigation

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indicated that the changes in the animal organs in all four series were identical. Animals killed immediately after the experiment showed marked hemodynamic changes. Blood was congested in the righthand chambers of the heart, in the pulmonary artery, in the portal vein, in the brain, in the kidneys, and in the liver. The myocardium was almost bloodless. Animals which were killed a day after the experiment, or later, did not show these hemodynamic changes. Macroscopic changes were seen only in the lungs. Microscopic examination of the brain, one hour after the conclusion of the experiment, showed a mild edema of the brain matter and connective tissues. A day later, dystrophic processes appeared in ganglial cells (chromatolysis, swelling, vacuolization), including the formation of shadow cells. These changes reached their maximum on the third day. By the seventh to fifteenth days, the ganglial cells of the cortex of the brain had a normal appearance. The phenomena of proliferation of glial cells continued to hold in some cases up to thirty or even sixty days. In cardiac tissue, one hour after the experiment, along with anemia and edema of the connective tissue, eosinophilia of the muscle fibers appeared. After a day, the edema diminished, while phenomena of protein dystrophy increased. After the third day, dystrophic processes gradually diminished, and by the fifteenth day, the myocardium resumed its normal structure. The lungs of all animals, one hour after the experiment, showed a marked plethora, especially on the dorsal side. The majority of the animals also

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ACCESSION NR: AT4042708

showed hemorrhages and edema. After one to three days, signs of the edema and the hemorrhages began to diminish, and by the seventh day the majority of the hemorrhages was readsorbed. In the liver, by the end of one day, considerable venous congestion was observed accompanied by grainy and sometimes vacuolar dystrophy. Normal structure reappeared in the liver by the third to the seventh day. Plethora of the kidneys was observed an hour after completion of the experiment. Subsequently, grainy and sometimes vacuolar dystrophy developed in the epithelium of the convoluted canals. At the end of a month, however, no changes could be observed in the kidneys. The pathomorphological picture of the brain and the myocardium resembles changes encountered during hypoxia. Apparently, transverse accelerations cause a significant disruption of the supply of blood to the brain and to the myocardium. The majority of the changes in the morphological picture brought about by transverse accelerations, however, appears to be reversible

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

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